IN THE CLAIMS

Appplicant amends the Claims as follows:

1.(Previously Presented) A method of vacating a portion of a photoceram, the method comprising,

generating a laser beam at a predetermined wavelength within a weak absorption region of the photoceram,

focusing the laser beam into a beam waist at a focal depth into the photoceram,

illuminating the photoceram by the laser beam to expose a focal volume of the photoceram at a focal depth where the laser beam converts the photoceram into an amorphous exposed material in the focal volume,

heating the amorphous exposed material for forming crystallized material from the amorphous exposed material in the focal volume, and

dissolving the crystallized material in an acid for evacuating crystallized material from the focal volume and creating a focal volume vacancy defining the portion.

2. (Previously Presented) The method of claim 1 wherein,

the portion serves to suspend another portion of the photoceram.

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3. (Previously Presented) The method of claim 1 wherein,

the portion serves to undercut another portion of the photoceram.

4. (Previously Presented) A method of forming a three dimensional embedded structure in a photoceram, the method comprising,

generating a laser beam at a predetermined wavelength within a weak absorption region of the photoceram,

focusing the laser beam into a beam waist at a focal depth into the photoceram,

illuminating the photoceram by the laser beam to expose a focal volume of the photoceram at a focal depth where the laser beam converts the photoceram into an amorphous exposed material in the focal volume,

heating the amorphous exposed material for forming crystallized material from the amorphous exposed material in the focal volume, and

dissolving the crystallized material in an acid for evacuating crystallized material from the focal volume and creating a focal volume vacancy defining the three dimensional embedded structure.

5. (Currently Amended) The method of claim 4 wherein,

the photoceram is ~~Foturan~~ a lithium aluminosilicate photostructable glass ceramic material, and

the predetermined wavelength is greater than 350nm.

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6. (Previously Presented) The method of claim 4 wherein,

the predetermined wavelength is an ultraviolet wavelength.

7. (Previously Presented) The method of claim 4 wherein the illuminating step comprises the steps of,

exposing the photoceram at the predetermined wavelength for a predetermined number of pulses to provide a critical dose at the focal depth for creating a pixelized volume of amorphous exposed material,

moving the photoceram a predetermined step distance relative to the laser beam, and

repeating the exposing and moving step a plurality of times for creating a respective plurality of pixelized volumes forming the focal volume.

8. (Previously Presented) The method of claim 7 wherein,

the predetermined number of pulses is between 100 and 10000 for delivering the critical dose for converting the photoceram into the amorphous exposed material.

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9. (Previously Presented) The method of claim 4 wherein the dissolving steps 4 further comprising the steps of,

forming a top via in the photoceram for communicating the acid into the focal volume for dissolving the crystalline material in the focal volume,

dissolving the crystalline material in the focal volume with the acid communicated into the focal volume through the top via,

forming a bottom via in the photoceram for vacating dissolved crystalline material out of the focal volume, and

vacating the dissolved crystalline material through the bottom via.

10. (Previously Presented) The method of claim 9 wherein the forming steps for forming the top and bottom via comprise the steps of,

exposing the photoceram in a top region for creating a top via volume of amorphous expose material for defining the top via,

exposing the photoceram in a bottom region for creating a bottom via volume of amorphous expose material for defining the bottom via, the baking step serving to bake the amorphous exposed material in the top and bottom via volumes into crystallized material, the dissolving step serving to dissolve the crystallized material out of the top and bottom volumes for forming the top via and bottom vias.

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11. (Previously Presented) The method of claim 4 wherein,

the illumination step exposes the focal volume during an exposure time at an intensity level,

the intensity level and the exposure time provide an exposure dose above a minimum critical dose necessary for converting the photoceram into the amorphous exposed material, and

the minimum critical dose is a nonlinear function of the intensity level.

12. (Previously Presented) The method of claim 4 wherein,

the laser is a pulsed laser,

the laser beam is a pulsed laser beam having a predetermined number of pulses,

the illumination step exposes the focal volume for the predetermined number of pulses having a per pulse fluence level over a predetermined pulse width time,

the per pulse fluence level and the predetermined number of pulses provide an exposure dose above a minimum critical dose necessary for converting the photoceram into the amorphous exposed material, and

the minimum critical dose is a nonlinear function of the per pulse fluence level.

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13. (Previously Presented) A method of forming a three dimensional embedded structure in a photoceram, the method comprising,

generating a pulsed laser beam at a UV wavelength within a weak absorption band of the photoceram,

focusing the laser beam into a beam waist at a focal depth into the photoceram,

exposing the photoceram at the UV wavelength a predetermined number of pulses at focal depth for creating a pixelized volume of amorphous exposed material,

moving the photoceram a predetermined step distance, and

repeating the exposing and moving step a plurality of times for creating a respective plurality of pixelized volume forming a focal volume,

heating the photoceram to heat the amorphous exposed material in the focal volume to bake the amorphous material into a crystallized material, and

dissolving the crystallized material in an acid for evacuating the crystallized material from the focal volume creating a focal volume vacancy defining the three dimensional embedded structure.

14. (Currently Amended) The method of claim 13 wherein,

the photoceram is ~~Foturan~~ a lithium aluminosilicate photostructable glass ceramic material,

the ultraviolet wavelength is 355nm, and

the number of pulses is between 100 and 10000.

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15. (Previously Presented) The method of claim 13 wherein, all the steps are repeated for forming a plurality of embedded structures.

16. (Previously Presented) The method of claim 13 wherein the embedded structure is an undercut structure.

17. ((Previously Presented) The method of claim 13 further comprising the step of, agitating the acid for transporting the acid through the top via into the focal volume.

18. (Previously Presented) The method of claim 13 further comprising the step of, pressurizing the acid for transporting the acid through the top via into the focal volume.

19. (Previously Presented) The method of claim 13 wherein the illumination laser beam has a Gaussian profile and is focused at the focal depth in the photoceram.

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20. (Previously Presented) The method of claim 13 wherein,

the UV wavelength is at an edge between the weak absorption region and the strong absorption region of the photoceram,

the illumination step exposes the focal volume for the predetermined number of pulses having a per pulse fluence level over a predetermined pulse width time,

the per pulse fluence level and the predetermined number of pulses provide an exposure dose above a minimum critical dose necessary for converting the photoceram into the amorphous exposed material, and

the minimum critical dose is a nonlinear function of the per pulse fluence level.

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